

## REMARKS

*Application Status*

Claims 1, 2, <sup>and</sup> 4-16 are pending of which, both of the independent claims (i.e., claims 1 and 11) are amended herein. Paper No. 15, to which this Amendment responds, states that each of the pending claims presently stand rejected.

*Discussion of the Claim Amendments*

Claims 1 and 11 have been amended by incorporating the limitations of previously pending claim 3. Claim 3 has been canceled without prejudice. Accordingly, no new matter has been added by way of this Amendment.

*Discussion of the Obviousness Rejections*

Claims 1 and 5-16 were rejected under Section 103. However, the reasoning supporting these rejections does not apply to these claims as presently pending. Accordingly, this rejection should be withdrawn.

The Office Action asserts that claims 2-4 are obvious over Chomcynski's '515 reference in view of other art of record. Claims 1 and 3 have been amended by incorporating the limitations of claim 3. Therefore, this rejection is now arguably relevant to claims 1 and 11. With respect to claim 3, the Office Action alleges the buffer of the Chomcynski reference contains lower levels of solvents and that in order to achieve the benefit of precipitation, the buffer of the Chomcynski reference would have been combined with Uematsu et al. and other prior art. Applicants respectfully traverse the rejection.

Applicants have considered the teachings of the art of record, but have not identified the reason why the skilled artisan would combine the Chomcynski reference with the other art of record.

Nothing in Chomcynski suggests that the buffer used therein is suitable for use with metal oxide particle mediated capture of nucleic acids. In fact, Chomcynski is directed to recovery of nucleic acids by centrifugation. RNA is precipitated by centrifugation for 8 minutes (see column 6, lines 55-57). DNA was isolated by adding additional solvent and centrifuging (see column 7, lines 20-23).

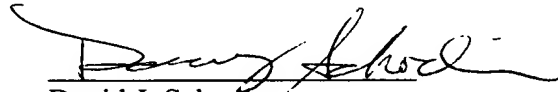
Even if the skilled artisan were motivated to combine Chomcynski with the other art of record, applicants have been unable to ascertain why the skilled artisan would be motivated to combine the buffer of Chomcynski with the remainder of Uematsu et al. and/or Kim. In that regard, one wonders what would motivate the skilled artisan to discard the buffers of the other references which were known to be functional, for the buffer of Chomcynski which would be an unproven in the context of the Uematsu and Kim references.

For both of the foregoing reasons, applicants respectfully request withdrawal of the rejection.

*Conclusion*

In view of the foregoing, applicant respectfully requests the Examiner to indicate the allowability of the subject patent application.

Respectfully submitted,  
G. Gundling



David J. Schodin  
Registration No. 41,294  
Agent for Applicants

Dated: March 5, 2002  
ABBOTT LABORATORIES  
D-0377/AP6D-2  
100 Abbott Park Road  
Abbott Park, IL 60064-6050  
Telephone: (847) 937-7022  
Facsimile: (847) 938-2623



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PATENT

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Applicants: G. Gundling

Group Art No.: 1656

Application No.: 09/470,944

Examiner: A. Spiegler

TECH CENTER 1600/2900

Filed: December 22, 1999

Title: NUCLEIC ACID ISOLATION  
METHOD AND KIT

I hereby certify that this paper  
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Assistant Commissioner for Patents  
Washington, D.C. 20231, on:  
Date of Deposit: March 5, 2002

*David J. Schodin* 3/5/02  
Name: Date  
*David J. Schodin*

Assistant Commissioner for Patents  
Washington, D.C. 20231

ATTACHMENT TO AMENDMENT C  
AMENDED CLAIMS:  
VERSION WITH MARKINGS TO SHOW CHANGES

1. (Three Times Amended) A method for separating nucleic acid from a test sample comprising:
  - a) contacting a test sample with a metal oxide support material and a binding buffer such that the nucleic acid bonds with the metal oxide support material, wherein the binding buffer comprises a chaotropic agent and a detergent and the flashpoint of the binding buffer is greater than 130 degrees fahrenheit;
  - b) separating the complexes from the test sample; and

c) eluting the nucleic acid from the metal oxide support material, thereby separating the nucleic acid from the test sample.

11. (Three Times Amended) A kit for separating nucleic acid from a test sample comprising:

a) metal oxide particles comprising metal oxide, wherein when the metal oxide particles are contacted with nucleic acids, the nucleic acid bonds with the metal oxide;

b) a binding buffer comprising

(i) a chaotropic reagent, and

(ii) a detergent,

wherein the binding buffer has a flashpoint of the binding is greater than 130 degrees fahrenheit; and

d) an elution buffer comprising water.